

**WHAT IS CLAIMED IS:**

Sub A1  
1. A method of bringing a base station having modified base station capabilities into cellular radio traffic by automatically sending to a network manager capability information corresponding to operational capabilities of the modified base station and automatically receiving configuration information from the network manager identifying operational parameters for use by the modified base station in administering the cellular radio traffic.

2. A method according to claim 1, wherein the modified base station capabilities comprise a completely new base station being brought into the cellular radio traffic.

Sub A2  
3. A method according to claim 1, wherein the capability information and the configuration information are in the format of a common abstract resource information model.

4. A method according to claim 3, wherein the base station automatically creates the abstract resource information model based on hardware and software infrastructures of the base station.

5. A method according to claim 4, wherein the abstract resource information model is created using combinational relationships between various hardware and software infrastructure objects of the base station and attribute information for various hardware and software infrastructure objects of the base station.

6. A method according to claim 5, wherein the hardware and software infrastructure objects in the abstract resource information model include frequency spectrum information, maximum power information, and channel type information and wherein the  
5 combinational relationships between the objects describe relationships between radio connection units, carrier units and antenna units.

7. A base station, comprising:

10 a base station resource infrastructure management layer for administration of the base station software and hardware infrastructure;

a base station abstract resource management layer having its own element management operating system based on an abstract information model identifying operational capabilities of  
15 the base station software and hardware infrastructure, wherein said information model is independent of any format of said base station software and hardware infrastructure; and

a site capabilities application for creating the abstract information model based on the base station software and hardware  
20 infrastructure.

8. A base station according to claim 7, further comprising:

an infrastructure element manager for administering the infrastructure management layer.

9. A base station according to claim 7, further comprising:  
a communication link with a physically remote mobile  
network for communicating said operational capabilities to said  
remote mobile network and for receiving from said remote mobile  
5 network configuration information based on the operational  
capabilities.

10. A base station according to claim 9, wherein:  
the operational capabilities and the configuration  
information are both formatted according to the abstract information  
10 model.

11. A base station according to claim 7, wherein the abstract  
information model defines abstract information objects for the  
software and hardware infrastructure and combination relationships  
between the various abstract information objects.

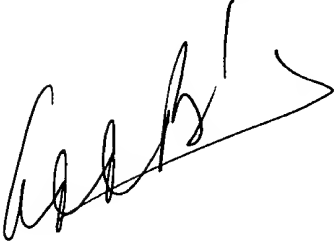
15 12. A base station according to claim 7, wherein the abstract  
information model represents the operational capabilities by  
attributes in abstract information model objects.

13. A base station according to claim 7, wherein  
the abstract information model defines abstract  
20 information objects for the software and hardware infrastructure and  
combination relationships between the various abstract information  
objects; and

the abstract information model represents the operational capabilities by attributes in abstract information model objects.

14. A base station according to claim 13, wherein the  
5 attribute information includes frequency spectrum information, maximum power information, and channel type information.

15. A base station according to claim 13, wherein the combination relationships includes relationships between radio connection units, carrier units and antenna units within the software  
10 and hardware infrastructure.

A handwritten signature in black ink, appearing to be 'G. B. S.', is written over the text of claim 15.